





### INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup>: H04N 7/173, 5/44

A1

(11) International Publication Number:

WO 98/47288

(43) International Publication Date:

22 October 1998 (22.10.98)

(21) International Application Number:

PCT/US97/17038

(22) International Filing Date:

23 September 1997 (23.09.97)

(30) Priority Data:

60/043,539

14 April 1997 (14.04.97) U

US

(71) Applicant (for all designated States except US): THOMSON CONSUMER ELECTRONICS, INC. [US/US]; 10330 North Meridian Street, Indianapolis, IN 46290-1024 (US).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): HAILEY, James, Edwin [US/US]; 7239 Creekside Lane, Indianapolis, IN 46250 (US). JOHNSON, Michael, Wayne [US/US]; 7316 Cobblestone West Drive, Indianapolis, IN 46236 (US).
- (74) Agents: TRIPOLI, Joseph, S. et al.; GE & RCA Licensing Management Operation, Inc., P.O. Box 5312, Princeton, NJ 08543 (US).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

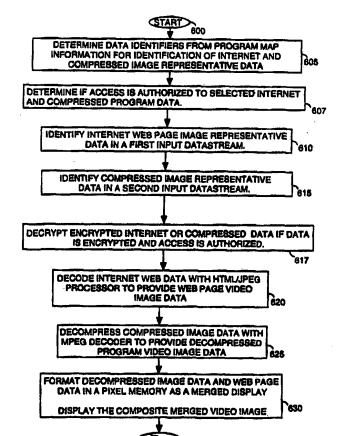
#### **Published**

With international search report.

(54) Title: SYSTEM FOR FORMING AND PROCESSING AN MPEG COMPATIBLE DATASTREAM INCORPORATING INTERNET INFORMATION

#### (57) Abstract

A data format includes MPEG compatible video data and Internet image information suitable for conveying packetized video program data and associated web image information. The data format comprises MPEG system data that includes a first transport packet with a header containing a first data identifier (PID) for identifying (605, 615) the video program data in a payload of the first transport packet. The MPEG system data also includes a second transport packet containing a second data identifier (PID) for identifying (605, 610) Internet information contained in a payload of the second transport packet. The MPEG system data also includes ancillary data supporting the identification and decoding (620, 625) of the Internet information and containing the second data identifier. Internet data in the composite data format is decoded and synchronized with video program data by applying the ancillary data in identifying, decoding and assembling (630) the Internet information.



#### FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

4 4							
AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM -	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	T.J	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav	TM	Turkmenistan
BF	Burkina Faso	· GR	Greece		Republic of Macedonia	TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	ÜA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	ÙG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JР	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	zw	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's	NZ	New Zealand	~,,	zimoabwe
CM	Cameroon		Republic of Korea	PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

2

PC/TV system User interface, for example, should allow a User to view a selected program and permit User operation of functions such as Email, telephone, Internet access, fax and video-phone functions. Such applications require communication between a 5 PC/TV unit and a variety of both remote sources e.g. a satellite service provider, and local sources e.g. a DVD storage device. Further, a PC/TV needs to process and decode data in different data formats from different devices and display received data to the User. These problems are addressed by a system according to 10 the present invention.

### Summary of the Invention

The inventors have hereby recognized that a Program 15 Guide type of User interface advantageously provides a simple, easy to use interface for User operation of functions such as Email, telephone, Internet access, fax, home control, and video-phone functions. The use of a Program Guide for such functions also advantageously provides a single User interface for User operation 20 of multiple devices and associated functions.

The inventors have further recognized that Internet information requested via a program guide or other type of User interface may be advantageously conveyed in a composite data format including MPEG compatible video data. They have further 25 recognized that it is desirable for a video decoder system to be capable of decoding such a composite data format.

A disclosed data format includes MPEG compatible video data and Internet image information suitable for conveying packetized video program data and associated web image 30 information. The data format comprises MPEG system data that includes a first transport packet with a header containing a first data identifier (PID) for identifying the video program data in a payload of the first transport packet. The MPEG system data also includes a second transport packet containing a second data 35 identifier (PID) for identifying Internet information contained in a payload of the second transport packet. The MPEG system data also includes ancillary data supporting the identification and

#### 30 CLAIMS

1. A composite data format including MPEG compatible video data and Internet image information suitable for conveying 5 packetized video program data and associated web image information, comprising:

MPEG system data including

- (a) a first transport packet with a header containing a first data identifier (PID) for identifying said video program data 10 in a payload of said first transport packet;
  - (b) a second transport packet containing
    a second data identifier (PID) for identifying said
    Internet information, said Internet information being contained in
    a payload of said second transport packet; and
- ancillary data containing said second data identifier and supporting identification and decoding of said Internet information.
- 2. A data format according to claim 1, wherein said ancillary data includes at least one of: (a) a web image data start code; (b) a packet count; (c) packet length; (d) packet linking data; (e) a web image data indication flag; (f) a timing parameter for synchronizing web image information with a video or audio program; (g) web image size and (h) error 25 correction data.
- 3. A data format according to claim 2, wherein at least one element of said ancillary data is contained in said header of said second transport packet; and

  at least one element of said ancillary data is contained in said payload of said second transport packet.
- 4. A data format according to claim 1, wherein said second data identifier is contained in a header of 35 said second transport packet.

5. A data format according to claim 1, wherein said ancillary data is contained in said payload of said second transport packet.

5

6. A data format according to claim 1, wherein said MPEG system data includes program map information for associating said Internet information and said video program.

10

7. A data format according to claim 6, wherein said program map information associates said Internet information, said first data identifier and said second data identifier.

15

8. A data format according to claim 1, wherein said video program data is MPEG compatible compressed video data and said Internet information is non-MPEG compatible data.

20

- 9. A data format according to claim 8, wherein said Internet information comprises non-compressed video data.
- 25 10. A method for decoding a datastream containing packetized video program data and associated web image information, comprising the steps of:

identifying said video program data in a payload of a first transport packet using a first data identifier (PID) contained 30 in a header of said first transport packet;

deriving a second data identifier (PID) from ancillary data supporting identification and decoding of Internet information in a second transport packet;

identifying said Internet information in a payload of 35 said second transport packet using said second data identifier; and assembling said Internet information into an output datastream using said ancillary data.

11. A method according to claim 10, wherein in said assembling step

said Internet information is assembled into said output 5 datastream using at least one of: (a) a web image data start code; (b) a packet count; (c) packet length; (d) packet linking data; (e) a web image data indication flag; (f) a timing parameter for synchronizing web image information with a video or audio program; and (g) error correction data.

10

12. A method according to claim 10, including the steps of

decoding said assembled Internet information using a first method to provide a first decoded output;

- decoding said video program data using a second method to provide a second decoded output.
- 13. A method according to claim 12, wherein said first method decodes non-MPEG compatible 20 Internet information, and

said second method decompresses MPEG compatible compressed video data.

14. A method according to claim 10, wherein in said 25 deriving step

said second data identifier is derived from program map information associating said second data identifier with said Internet information.

30 15. A method according to claim 10, including the step of

deriving said first data identifier from program map information associating said first data identifier with said video program data.

33

16. A method for decoding a datastream containing packetized video program data and associated web image information, comprising the steps of:

identifying said video program data in a payload of a 5 first transport packet using a first data identifier (PID) contained in a header of said first transport packet;

deriving a second data identifier (PID) from ancillary data supporting identification and decoding of Internet information in a second transport packet;

- identifying said Internet information in a payload of said second transport packet using said second data identifier; and synchronizing said Internet information with said video program using said ancillary data.
- 15 17. A method according to claim 16, further including the steps of

identifying audio program data, and synchronizing said audio data with said Internet information.

## **PCT**

REC'D 20 JUL 1999
WIPO PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

International application No. PCT/US97/17038  International polication No. PCT/US97/17038  International Patent Classification (IPC) or national classification and IPC H04N7/173  Applicant THOMSON CONSUMER ELECTRONICS, INC. et al.  1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority is transmitted to the applicant according to Article 36.  2. This REPORT consists of a total of 6 sheets, including this cover sheet.  In this report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of 8 sheets.  3. This report contains indications relating to the following items:    Basis of the report   Ba		agent's file reference	FOR FURTHER ACTION Preli	Notification of Transmittal of International iminary Examination Report (Form PCT/IPEA/416)
International aptent Classification (IPC) or national classification and IPC H04N7/173  Applicant THOMSON CONSUMER ELECTRONICS, INC. et al.  1. This international preliminary examination report has been prepared by this International Preliminary Examining Authand is transmitted to the applicant according to Article 36.  2. This REPORT consists of a total of 6 sheets, including this cover sheet.  3. This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of 8 sheets.  3. This report contains indications relating to the following items:				Priority date (day/moñth/year)
International Patent Classification (IPC) or national classification and IPC H04N7/173  Applicant THOMSON CONSUMER ELECTRONICS, INC. et al.  1. This international preliminary examination report has been prepared by this International Preliminary Examining Authand is transmitted to the applicant according to Article 36.  2. This REPORT consists of a total of 6 sheets, including this cover sheet.  \[ \begin{array}{c} This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of 8 sheets.  3. This report contains indications relating to the following items:				
Applicant THOMSON CONSUMER ELECTRONICS, INC. et al.  1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.  2. This REPORT consists of a total of 6 sheets, including this cover sheet.  ☑ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of 8 sheets.  3. This report contains indications relating to the following items:  □ ☑ Basis of the report □ □ Priority □ □ In Priority □ □ Lack of unity of invention □ V ☑ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement □ VI ☑ Certain documents cited □ VI ☑ Certain defects in the international application				14/04/133/
<ul> <li>This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</li> <li>This REPORT consists of a total of 6 sheets, including this cover sheet.</li> <li>This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</li> <li>These annexes consist of a total of 8 sheets.</li> <li>3. This report contains indications relating to the following items: <ol> <li>Priority</li> <li>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>Lack of unity of invention</li> <li>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement</li> <li>Certain documents cited</li> <li>Certain defects in the international application</li> </ol> </li> </ul>			r national classification and IPC	
<ul> <li>THOMSON CONSUMER ELECTRONICS, INC. et al.</li> <li>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</li> <li>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</li> <li>☑ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</li> <li>These annexes consist of a total of 8 sheets.</li> <li>3. This report contains indications relating to the following items:  □ Priority □ Priority □ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability □ Lack of unity of invention □ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement</li> <li>∪ Certain documents cited</li> <li>∪ Certain defects in the international application</li> </ul>	•			
THOMSON CONSUMER ELECTRONICS, INC. et al.  1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.  2. This REPORT consists of a total of 6 sheets, including this cover sheet.  2. This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of 8 sheets.  3. This report contains indications relating to the following items:	Applicant			
and is transmitted to the applicant according to Article 36.  2. This REPORT consists of a total of 6 sheets, including this cover sheet.  □ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of 8 sheets.  □ Basis of the report □ Priority □ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability □ Lack of unity of invention □ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement □ Certain documents cited □ Certain defects in the international application	THOMSON	CONSUMER ELECT	RONICS, INC. et al.	
and is transmitted to the applicant according to Article 36.  2. This REPORT consists of a total of 6 sheets, including this cover sheet.  □ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of 8 sheets.  □ Basis of the report □ Priority □ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability □ Lack of unity of invention □ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement □ Certain documents cited □ Certain defects in the international application	1. This into	rnational preliminary ex	amination report has been prepared by th	nis International Preliminary Examining Authority
<ul> <li>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</li> <li>☑ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</li> <li>These annexes consist of a total of 8 sheets.</li> <li>3. This report contains indications relating to the following items: <ol> <li>☑ Basis of the report</li> <li>Ⅲ Priority</li> <li>Ⅲ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>Ⅳ Lack of unity of invention</li> <li>Ⅴ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement</li> <li>Ⅵ ☑ Certain documents cited</li> <li>Ⅵ ☑ Certain defects in the international application</li> </ol> </li> </ul>	and is tr	ansmitted to the applica	nt according to Article 36.	
<ul> <li>☑ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</li> <li>These annexes consist of a total of 8 sheets.</li> <li>3. This report contains indications relating to the following items:         <ul> <li>I</li> <li>Basis of the report</li> <li>II</li> <li>Priority</li> <li>III</li> <li>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV</li> <li>Lack of unity of invention</li> <li>V</li> <li>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement</li> <li>VI</li> <li>© Certain documents cited</li> <li>VII</li> <li>© Certain defects in the international application</li> </ul> </li> </ul>				
This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of 8 sheets.  This report contains indications relating to the following items:  Basis of the report  Priority  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  Lack of unity of invention  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement  Certain defects in the international application	o This DE	PORT consists of a total	Lof 6 sheets, including this cover sheet.	
been amended and are the basis for this report and/or sheets containing rectifications inlade before this Administrative (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of 8 sheets.  This report contains indications relating to the following items:  Basis of the report  Priority  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  Lack of unity of invention  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement  Certain documents cited  Certain defects in the international application			•	
I	These a	innexes consist of a tota	ul of 8 sheets.	
I				
I	<u>.</u>		relating to the following Home:	
II ☐ Priority  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  V ☐ Lack of unity of invention  V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement  VI ☒ Certain documents cited  VII ☒ Certain defects in the international application	3. This rep	ort contains indications	relating to the following items.	
II ☐ Priority  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  V ☐ Lack of unity of invention  V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement  VI ☒ Certain documents cited  VII ☒ Certain defects in the international application	1	☑ Basis of the report		
Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  IV □ Lack of unity of invention  V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement  VI ☒ Certain documents cited  VII ☒ Certain defects in the international application	•			
<ul> <li>IV □ Lack of unity of invention</li> <li>V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement</li> <li>VI ☒ Certain documents cited</li> <li>VII ☒ Certain defects in the international application</li> </ul>		⊠ Non-establishment	of opinion with regard to novelty, inventive	e step and industrial applicability
<ul> <li>∨ ⊠ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement</li> <li>∨ I ⊠ Certain documents cited</li> <li>∨ I ⊠ Certain defects in the international application</li> </ul>		☐ Lack of unity of inve	ention	
VI ☑ Certain documents cited VII ☑ Certain defects in the international application		□ Reasoned statement     □ Reasoned s	nt under Article 35(2) with regard to novel	ty, inventive step or industrial applicability;
VII   Certain defects in the international application	VI	`		
The state of the s			in in the state of the state o	
	* 111			

Date of submission of the demand	Date of completion of this report	•
06/11/1998	16. 07. 99	
Name and mailing address of the international preliminary examining authority:	Authorized officer	S STATE OF MILITARY
European Patent Office D-80298 Munich Tel (+49-89) 2399-0 Tx: 523656 epmu d	Noll, B	

### INTERNATIONAL PRELIMINARY **EXAMINATION REPORT**

☐ the entire international application.

☑ claims Nos. 16-22.

International application No. PCT/US97/17038

1. Basis	of the	report
----------	--------	--------

	Basis of the report	.*			•			
	This report has been d response to an invitati the report since they d	on under Article 14 a	re referred i	sheets which to in this repo	have been fun nt as "originally	nished to the filed" and ar	receiving e not ann	g Office exed to
•	Description, pages:				• •	-		. "
	1,3-29	as originally filed		•				
	2,2a	as received on		30/03/1999	with letter of	25/0	3/1999	
-	Claims, No.:		•					
	1-22	as received on	•	30/03/1999	with letter of	25/0	3/1999	-
	Drawings, sheets:			•			•	
	1/9-9/9	as originally filed		÷				
						•		•
2.	The amendments hav	e resulted in the can	cellation of:	*•			ista e e e e e e e e e e e e e e e e e e e	
	☐ the description,☐ the claims,	pages: Nos.:						
	the drawings,	sheets:	•		• .			
3.	This report has become dependent of the considered to do	een established as if beyond the disclosu	(some of) the company of the company	he amendmei Rule 70.2(c)):	nts had not bee	en made, sind	ce they ha	ive beer
	Considered to go	,			•			
	. i. i. i.	• • • • • • •	. <del>.</del> .	**************************************	e y e e e e e e e e e e e e e e e e e e		u si	•
4.	Additional observation	ns, if necessary:					. •	
					n			
						•	٠	
111.	Non-establishment o	of opinion with rega	ard to novel	ty, inventive	step and indu	ıstrial applic	ability	
Th	ne questions whether the to be industrially applicated	ne claimed invention	appears to	be novel, to ir			•	ovious),

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US97/17038

			٠							
bec	cause:			•					: •	
	the said international a not require an international	pplicatio	n, or the s liminary e	aid claim xaminatio	s Nos. relat n ( <i>specify</i> ):	e to the f	ollowing s	ubject matt	er which do	es
							•			
	<ul><li>the description, claims that no meaningful opi</li></ul>	or drawi nion cou	ngs ( <i>indic</i> ld be form	cate partic led (speci	ular elemer fy):	its below	or said cl	aims Nos.	are so unc	lear
		٠			·					
	the claims, or said clair could be formed.	ms Nos.	are so in	adequate	ly supported	d by the o	lescription	that no me	aningful op	inion
		n report h	nas been (	establishe	d for the sa	id claims	Nos. 16-2	22.		
					• • • • • • • • • • • • • • • • • • •		-		•	
٧.	Reasoned statement und applicability; citations an	er Articl d explai	e 35(2) w nations s	ith regard upporting	d to novelty such state	/, invent ement	ive step o	r industria	<b>.</b>	
1.	Statement			•				÷ .		
	Novelty (N)	Yes: No:	Claims Claims	1-15				*:		
	Inventive step (IS)	Yes: No:	Claims Claims	1-15				• • •		
	Industrial applicability (IA)	Yes:	Claims	1-15				•		

Claims

2. Citations and explanations

see separate sheet

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US97/17038

#### VI. Certain documents cited

- Certain published documents (Rule 70.10)
   and / or
- Non-written disclosures (Rule 70.9)see separate sheet

## VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted: see separate sheet

#### INTERNATIONAL PRELIMINARY **EXAMINATION REPORT - SEPARATE SHEET**

#### To section III:

Independent claims 16 and 19 comprise the feature that the Internet information is processed to form a composite image with the video program. This feature was not in the original set of claims and has not been searched. Consequently, no search report has been established for present claims 16-22.

#### To section V:

With regard to claim 1 the document US-A-5 544 161 (hereinafter referred to as D1) discloses a data format for distributing video and other information through an ATM network. An ATM packet demultiplexer provides for flexible MPEG addressing of incoming data, i.e. it encodes the data into MPEG packets having specific PIDs (column 7, line 66 to column 8 line 21). Hence there already exists a composite MPEG data format carrying video data packets, which include respective identifiers in the header, and other information packets likewise including corresponding identifiers in the header.

Present claim 1 includes the following additional features:

- (a) the second transport packet contains Internet information
- (a) the second data packet contains ancillary data for supporting identification and decoding of the Internet information.

Regarding feature (a) it is already known from D1 to enable transport of Internet data through the network (column 8, lines 53-62). Since the ATM packet demultiplexer encodes various kinds of data into MPEG form a skilled person would directly envisage to also encode Internet information into MPEG form to transmit it to users through the network described in D1. Regarding feature (b) it is an intrinsic feature of MPEG packets that the header contains information supporting decoding of the received information. For example, a header of a video sequence defines things like frame rate, resolution etc (see D1, column 24, lines 13-16). Hence a skilled person directly envisages to include information for supporting decoding also in the additional packets which carry Internet information. Therefore, the method of claim 1 is not based on an inventive step.

The additional features of claims 2-5 are likewise evident from D1, see passages above and column 10, line 25 to column 11, line 44 as well as column 23, lines 48-51. The features of claims 6-9 are obvious from D1, see passages mentioned above and col-

## INTERNATIONAL PRELIMINARY InterEXAMINATION REPORT - SEPARATE SHEET

umn 23, lines 48-64.

Claim 10 concerns a method of decoding a data stream having a format as described in claim 1. A skilled person which intends to detect different kind of data from the received data stream directly envisages that the data identifiers corresponding to packets carrying desired information are identified. See also D1, column 23, line 48 to column 24, line 22.

Claims 11-15 relate to details of decoding the MPEG and non- MPEG data which are obvious from the above mentioned passages of D1.

#### To section VI:

The documents:

WO-A-97 28499 (filed 31.1.97; published 7.8.97; claimed priority 2.2.96),

WO-A-97 41690 (filed 1.5.97; published 6.11.97; claimed priority 2.5.96), and

US-A-5 666 487 (filed 28.6.95; published 9.9.97)

are considered as relevant with the present claims. It should be mentioned that their priorities and that of the present application have not been checked.

#### To section VII:

Reference signs in parentheses should be inserted in the claims to increase their intelligibility, Rule 6.2(b) PCT. This applies to both the preamble and characterising portion.



## TE TOOPERATION TREATY



### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	(Form PCT/ISA/2	of Transmittal of International Search Report 220) as well as, where applicable, item 5 below.
RCA 88751	ACTION	
International application No.	International filiring date (day/month/year)	(Earliest) Priority Date (day/month/year)
PCT/US 97/17038	2/3/09/1997	14/04/1997
Applicant		
THOMSON CONSUMER ELECTRON	ICS, INC. et al.	
This International Search Report has bee according to Article 18. A copy is being tra	n prepared by this International Searching Aut ansmitted to the International Bureau.	hority and is transmitted to the applicant
This International Search Report consists	of a total of 3 sheets.	
	y of each prior art cocument cited in this repor	
1. Certain claims were found un	searchable(see Bc !).	
2. Unity of invention is lacking(	see Box II).	
The international application co	ntains disclosure of a relectide and/or amin	o acid sequence listing and the
international search was carried	I out on the basis of the sequence listing	
	d with the internation.	
furr	nished by the application parately from the inte	
	but not accompanied by a statement to the matter going beyond the disclosure in the	ne effect that it did not include e international application as filed.
	•	
Tra	nscribed by this Authority	
4. With regard to the title, χ the	text is approved as submitted by the applicant	
	text has been established by this Authority to	
	,	
		· · · · · · · · · · · · · · · · · · ·
5. With regard to the abstract,		•
	text is approved as submitted by the applicant	t
	text has been established, according to Rule 3	
	III. The applicant may, within one month from arch Report, submit comments to this Authority	
	•	
6. The figure of the <b>drawings</b> to be pub	lished with the shetract is:	
	suggested by the applicant.	None of the figures.
	suggested by the applicant.  cause the applicant failed to suggest a figure.	[ ] Notice of the lightes.
	ause this figure better characterizes the inven	ion .
	and light botton characterizes are invent	

## INTERNATIONAL SEARCH REPORT

Interr Application No PCT. 97/17038

A. CLASSIFICATION OF SUBJECT MATTER IPC 6 H04N7/173 H04N H04N5/44

According to International Patent Classification (IPC) or to both national classification and IPC

#### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 HO4N G06F

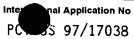
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Rélevant to claim No.
X	US 5 544 161 A (BIGHAM J. ET AL) 6 August 1996	1-16
	see column 33, line 11 - column 40, line 39	
	see column 2, line 46 - column 7, line 47	
Α	US 5 481 542 A (LOGSTON G. ET AL) 2 January 1996 see column 3, line 14 - column 4, line 32 see column 19, line 60 - line 61 see column 19, line 18 - column 29, line 23	1-16
Α	WO 97 09827 A (NEC AUSTRALIA PTY LTD) 13 March 1997 see page 6, line 17 - page 8, line 30 see page 15, line 26 - page 20, line 15 see page 25, line 10 - page 27, line 27	1,10,16

X Further documents are listed in the continuation of box C.	X Patent family members are listed in annex.
Special categories of cited documents :  "A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier document but published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
which is cited to establish the publicationdate of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means  "P" document published prior to the international filing date but	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu- ments, such combination being obvious to a person skilled in the art.
later than the priority date claimed  Date of the actual completion of theinternational search	"&" document member of the same patent family  Date of mailing of the international search report
3 February 1998	13/02/1998
Name and mailing address of the ISA  European Patent Office, P.B. 5818 Patentlaan 2	Authorized officer
NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Verschelden, J

### INTERNATIONAL SEARCH REPORT



		PC-55 9//1/038
C.(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Α .	US 5 583 864 A (LIGHTFOOT R. ET AL) 10 December 1996 see column 17, line 42 - line 46 see column 34, line 46 - column 36, line 11	1,10,16
A	EP 0 723 369 A (NTEX DATACOMMUNICATIONS BV) 24 July 1996 see the whole document	1,8-10, 16
A	PROFFIT B.: "INTERCAST BRINGS THE WEB TO TV" PC MAGAZINE, 21 January 1997, pages 203-204, XP002053914 see the whole document	1,8-10, 16
A	PATENT ABSTRACTS OF JAPAN vol. 97, no. 5, 30 May 1997 & JP 09 009160 A (SONY CORPORATION), 10 January 1997, see abstract	1,10,16
Р,Х	WO 97 28499 A (AWARD SOFTWARE INTERNATIONAL INC.) 7 August 1997 see the whole document	1,10,16
E	WO 97 41690 A (AWARD SOFTWARE INTERNATIONAL INC.) 6 November 1997 see the whole document	1,10,16
Ρ,Χ	US 5 666 487 A (GOODMAN W. ET AL) 9 September 1997 see the whole document	1-16
	•	

#### INTERNAZIONAL SEARCH REPORT

form patent family members

PC 3-3 97/17038

Patent docume cited in search re		Publication date	Patent family member(s)	Publication
US 5544161		06-08-96	NONE	date
US 5481542	A	02-01-96	AU 1087095 A BR 9408030 A CA 2176131 A CN 1134771 A EP 0728398 A JP 9505186 T WO 9513681 A	29-05-95 17-12-96 18-05-95 30-10-96 28-08-96 20-05-97 18-05-95
WO 9709827	Α	13-03-97	AU 6782896 A	27-03-97
US 5583864	Α	10-12-96	NONE	
EP 0723369	Α	24 <b>-</b> 07-96	NONE	
WO 9728499	Α,	07-08-97	NONE	
WO 9741690	Α	06-11-97	NONE	
US 5666487	Α	09-09-97	NONE	

### PATENT COOPERATION TREATY

From the	INTERN	ΔΤΙΌΝΔΙ	BUREAU

To:

F ELECTION

61.2)

**United States Patent and Trademark** Office (Box PCT) Crystal Plaza 2 Washington, DC 20231

in its capacity as elected Office

บรายยนยาทยยา เฮฮอ (บราเ2.98)

International application No.

PCT/US97/17038

International filing date (day/month/year) 23 September 1997 (23.09.97) Applicant's or agent's file reference

ÉTATS-UNIS D'AMÉRIQUE

**RCA 88751** 

Priority date (day/month/year)

14 April 1997 (14.04.97)

**Applicant** 

HAILEY, James, Edwin et al

	X in the demand filed with the International Preliminary Examining Authority on:	
	06 November 1998 (06.11.98)	
	in a notice effecting later election filed with the International Bureau on:	
2.	2. The election X was	
	was not	
	made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).	

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland

**Authorized officer** 

J. Leitao

Telephone No.: (41-22) 338.83.38

Facsimile No.: (41-22) 740.14.35